

Appl. No. 10/070,342
Amdt. dated 3 July 2003
Reply to Office action of 7-Apr-03

Amendment to add the ABSTRACT from the PCT International application:

ABSTRACT OF THE DISCLOSURE

A tool for cutting a soft electrically-conductive material, comprising a radio-frequency (RF) source electrically connected to an impedance matching circuit comprising a tuning element electrically connected to an inductive element. The inductive element is electrically connected to a conductive cutting tip through a switch-contact area. The impedance matching circuit is encased by a handheld-sized probe housing and the switch-contact area is interconnected therewith. The switch-contact area is preferably encased by the probe housing. Also, an associated method for cutting a soft electrically-conductive material using a probe to which an RF source is electrically connected, comprising: providing RF power from the source to an impedance matching circuit electrically connected to a conductive cutting tip through a switch-contact area; and making contact with the switch-contact area to allow an electric current to flow through the impedance matching circuit. Additional steps include: positioning the probe in proximity to the soft material such that at least one eddy current is induced in the soft electrically-conductive material within a region of the material to be cut.